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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/023,259	02/13/1998	WALLACE A. RITCHIE	101102-0002	6726
24267 7590 01/10/2007 CESARI AND MCKENNA, LLP 88 BLACK FALCON AVENUE BOSTON, MA 02210			EXAMINER HAN, QI	
			ART UNIT	PAPER NUMBER
			2626	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/10/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/023,259

Applicant(s)

RITCHIE ET AL.

Examiner

Qi Han

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-13 and 17-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-13 and 17-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Response to Amendment

3. This communication is responsive to the applicant's amendment and RCE examination both filed on 11/01/2006. The applicant(s) amended claims 1, 11 and 22-24 (see the amendment: pages 2 and 6-7). The response to the applicant's arguments are directed to the new ground rejection (see below).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claims 6 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 6, the **closed** limitation statement “**said** data selected from the group **consisting of ...**” appears in both instant dependent claim and its parent claim 1 **and** refers to the same item group but different group members, which conflict with each other, so as being indefinite.

Regarding claim 21, the open limitation statement “**the** data... further includes...” is directly conflict with the **closed** limitation statement “**said** data selected from the group **consisting of ...**”, so as being indefinite.

Claim Rejections - 35 USC § 103

5. Claims 1, 6-8, 11 and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lakritz et al. (US 5,586,198) hereinafter referenced as Lakritz, in view of ZHANG et al. (US 5,197,810) hereinafter referenced as ZHANG.

As per **claim 1**, Lakritz discloses method and apparatus for identifying characters in ideographic alphabet (title), comprising:

“selecting information from the group consisting of a stroke, a component and a character” (col. 5, line 61 to col. 6, line 18, ‘selected radical (component or portion of character)’; col. 7, lines 1-11 and Fig. 5, shows ‘stroke’, ‘radical’ and ‘character’ in groups; col. 8, lines 1-15);

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“storage of data related to the properties of Chinese characters and compounds” and “storage comprises data related to component parts of a Chinese character” (col. 4, lines 26-33, ‘Chinese alphabet’, ‘ideographic descriptions in maintained (stored) in a database...’), “said data selected from the group consisting of (1) the identification [and order of strokes used to draw said character], said strokes being in accordance with a selected classification scheme”, (col. 6, lines 1-17, ‘as the user drags (select) additional radicals to the canvas, constructing a more specific or complete form of the desired character, the number of matches shown in the selection window decreases’, ‘identification of the desired character’), “(3) the orthographic components of said character [in drawing order]” (col. 6, line 67 and Fig.3, ‘radicals (interpreted as orthographic components)’), “and (4) indicators of said character's membership within various subsets of Chinese characters” (col. 7, lines 1-13 and Figs. 3 and 5, ‘indicated by numeric designator (indicator)’);

“means for process of said input information [being based upon an order of strokes used to draw said character] for retrieving Chinese characters and compounds [based upon said stroke sequence,] said process means including a plurality of Chinese character encoding processes based on said stored data”, (col., 6, lines 51-65, ‘graphical user interface’, ‘mouse (input means)’, ‘ideographic description database’; Figs. 1-3, shows character table and component table in block 10 and/or 14 having possible inputting strokes, components and characters (candidates), and expending input by selecting strokes, components and/or characters); and

“means for display providing indication of correspondence between elements of said means for input and said display; wherein further character selection information is suggested in response to said input” (col., 6, lines 20-45, ‘kanji radicals’, ‘resulting in the display of a

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corresponding selection window 14 (including suggested selection information)', 'indicated by numeric designator 17', 'after additional radicals have been dragged... narrow the number of matches displayed in the selection window', which read on further character selection information is suggested).

But, Lakritz does not expressly disclose employing “**order of strokes** used to draw said character”, inputting information being “based upon an order of strokes used to draw said character” and “compounds based upon said **stroke sequence**” for retrieving Chinese characters. However, the feature is well known in the art as evidenced by Lakritz himself who teaches, in section of ‘Background of the Invention’ of the patent, that ‘specialized input method’ by using ‘specific sequence (order) of strokes’ for ‘ideographic characters’ is well known feature in the art, in which ‘this sequence is matched to a set of possible corresponding ideographs (candidates of characters or components)’ and ‘the matrix senses stroke starting point and stroke sequences based on the correct writing (order of strokes used to draw said character) of the ideograph to be identified’ (col. 3, lines 27-35), which suggests that the system has capability of using the components in drawing order because the component, such as radical, inherently uses the same drawing order as that of strokes for the characters. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine a variety of teachings of Lakritz by providing the specialized input method by using stroke sequences (order) based on correct writing of the ideograph (including stroke and component drawing order), for the purpose of better identifying the ideograph (character) for the input (Lakritz: col. 3, lines 27-34).

Further, Lakritz does not expressly disclose using “(2) the **frequency of occurrence of said character** as the first character of a word with respect to an operator's language”. However,

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the feature is well known in the art as evidenced by ZHANG who, the same field endeavor, discloses 'method and system for inputting simplified and/or original complex form of Chinese character' (title), comprising 'Chinese character attribute library (storage) and an everyday phrase bank which includes information of ...up-to-date practical frequency...for each simplified form and original complex form Chinese character' and 'statistical analysis program for frequency of usage and capability of character formation of radicals' (col. 6, lines 11-48), which are read on **frequency of occurrence of said character**. ZHANG further teaches 'three morphological types of radical: stroke, radical in common sense, and radical group', 'adopts...sequence of Chinese character stroke of the Chinese National Standard GB2312-18', and providing 'information of the **order of strokes**, **disassembling sequence of strokes**, **disassembling sequence of radicals**, ... for each simplified form and original complex form Chinese' (col. 6, lines 16-42). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lakritz by providing Chinese character attribute library including information of the order of strokes, sequence of radicals, frequency of usage and capability of character formation of radicals for Chinese character, as taught by ZHANG, for the purpose (motivation) of offering simplified and improved Chinese character inputting system and speeding up Chinese character inputting process (ZHANG: abstract).

As per **claim 6** (depending on claim 1), as best understood in view of the claim rejection under 35 USC 112 2nd (see above), the rejection is based on the same reason described for claim 1, because the rejection for claim 1 covers the same or similar limitation(s) of claim 6.

As per **claim 7** (depending on claim 1), the rejection is based on the same reason described for claim 1, because the rejection for claim 1 covers the same or similar limitation(s)

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of claim 1, wherein the radical in the cited reference(s) is reasonably interpreted as the orthographic component in the claim.

As per **claim 8** (depending on claim 7), Lakritz in view of ZHANG further discloses “a component comprised of fundamental strokes and a component comprised of a plurality of subcomponents” (Lakritz: Figs. 2-3, blocks 10, 12).

As per **claim 11**, it recites method for inputting Chinese character. The rejection is based on the same reason described for claim 1, because the claim recites the same or similar limitation(s) as claim 1.

As per **claim 21** (depending on claim 1), as best understood in view of the claim rejection under 35 USC 112 2nd (see above), the rejection is based on the same reason described for claim 6, because the claim recites the same or similar limitation(s) as claim 6.

As per **claim 22**, it recites “a computer-readable medium having a program recorded thereon for input of Chinese characters. The rejection is based on the same reason described for claim 1, because the rejection for claim 1 covers the same or similar limitation(s) as claim 22.

As per **claim 23** (depending on claim 22), Lakritz in view of ZHANG further discloses “character candidates and said component candidates are presented in a first area on said display means” (Figs. 1-3, block 10),

“means for presenting a stroke input through the input means in a second area on said display means”, (Lakritz: Figs 1-3, block 12);

“means for replacing the strokes being presented in the second area by a component input through the input means”, (Figs 1-3, blocks 10, 12 and 14); and

“means for clearing the contents of the second area, and presenting a character input through the input means in a third area on said display means”, (Figs 2-3, blocks 12 and 14).

As per **claim 24**, it recites method for inputting Chinese characters. The rejection is based on the same reason described for claim 22, because the claim recites the same or similar limitation(s) as claim 22.

6. Claims 2-4, 12-13 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lakritz in view of ZHANG as applied to claim 1, and further in view of Freeman (US 5,649,223).

As per **claim 2** (depending on claim 1), Lakritz in view of ZHANG does not expressly disclose “said means for input is selected from the group consisting of a keyboard and a touchscreen”. However, the feature is well known in the art as evidenced by Freeman who discloses word based text producing system (title), comprising ‘keyboard 11’ and ‘non-keyboard apparatus such as ... a touch sensitive screen’ for the stroke input system (col. 7, lines 15-28). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lakritz in view of ZHANG by providing keyboard and non-keyboard apparatus such as a touch sensitive screen for input, as taught by Freeman, for the purpose of enabling user to type easier and faster, or enabling rapid and easy input of text by persons without keyboard skills (Freeman: col. 3, lines 43-52).

As per **claim 3** (depending on claim 2), Lakritz in view of ZHANG and Freeman further discloses “a virtual keyboard comprising a representation of keys, each said key representation assigned to selection of a stroke, a component or a character” and “a special function key

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selected from the group of a more key and a wild card key”, (Freeman: col. 7, line 20, ‘virtual keyboard (includes function keys)’; col. 2, lines 37-38, ‘display functions responsive to function key operation’; col. 16, lines 53-62, ‘Chinese’ ‘other non-alphabetic languages’, ‘strokes, radicals... ideographic character’; ZHANG: col. 13, lines 44-65, ‘the “TAB” key’ (corresponding to “more key”), ‘during the inputting of Chinese characters...the keys “?” or “z” or “6” or “N” can be used in substitution as a wild card (wild card key)’; thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to recognize that the function keys and special keys, such as “more” and “wild card” keys used for real keyboard would also be used, like other keys for virtual keyboard).

As per **claim 4** (depending on claim 2), the rejection is based on the same reason described for claim 3, because the rejection for claim 3 covers the same or similar limitation(s) as claim 4.

As per **claim 12** (depending on claim 1), Lakritz in view of ZHANG does not expressly disclose “selection of said non word associated character automatically appends a word separator”. However, the feature is well known in the art as evidenced by Freeman who further discloses ‘selected words... are outputted by input actions which may append 'Space' or other punctuation endings’ (abstract and col. 5, lines 6-18). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lakritz in view of ZHANG by providing selection of non word such as space or punctuation as separator, as taught by Freeman, for the purpose of enabling user to type easier and faster, or enabling rapid and easy input of text by persons without keyboard skills (Freeman: col. 3, lines 43-52).

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As per **claim 13** (depending on claim 11), Lakritz in view of ZHANG and Freeman further discloses “selecting information from the group consisting of a stroke, a component and a character” (Lakritz: Figs. 2-3; Freeman: col. 16, lines 60-62, ‘strokes, radicals... ideographic character’).

As per **claim 17** (depending on claim 13), Lakritz in view of ZHANG and Freeman further discloses that “providing a component that is orthographic” (Lakritz: Figs. 2-3 and col. 6, line 67, ‘radicals (interpreted as orthographic components)’).

As per **claim 18** (depending on claim 13), the rejection is based on the same reason described for claim 8, because the claim recites the same or similar limitation(s) as claim 8.

7. Claims 9-10 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lakritz in view of ZHANG as applied to claims 1 and 13, and further in view of well known prior art (MPEP 2144.03).

As per **claim 9** (depending on claim 1), Lakritz in view of ZHANG further discloses “an order for the display of the next drawn candidate is based on the previous selection” (Lakritz: col. 3, lines 30-34, ‘sequence of strokes’ ‘stroke sequences based on the correct writing of ideograph’; col. 6, lines 33-36, ‘additional radical...narrow the number of matches displayed in the selection window’). But, Lakritz in view of ZHANG does not expressly disclose “the order for the display of component candidates is based on the cumulative frequencies of all possible Chinese characters”. However, an official notice is taken that the feature of providing ordered component candidates based on cumulative or total frequencies of possible Chinese character is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at

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the time the invention was made to modify Lakritz in view of ZHANG by specifically providing ordered component candidates based on cumulative or total frequencies of possible Chinese character, for the purpose (motivation) of offering improvised Chinese character inputting system (ZHANG: abstract).

As per **claim 10** (depending on claim 9), the rejection is based on the same reason described for claim 9, because the rejection for claim 9 covers the same or similar limitation(s) as claim 10, wherein cumulative frequencies is necessarily altered after entering (operation) a stroke or radical.

As per **claims 19-20** (depending on claim 13), the rejection is based on the same reason described for claims 9-10 respectively, because the claims recite the same or similar limitation(s) as claims 9-10 respectively.

Conclusion

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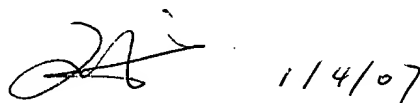
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Randolph Building
Alexandria , VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qi Han whose telephone numbers is (571) 272-7604. The examiner can normally be reached on Monday through Thursday from 9:00 a.m. to 7:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil, can be reached on (571) 272-7602.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Inquiries regarding the status of submissions relating to an application or questions on the Private PAIR system should be directed to the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028 between the hours of 6 a.m. and midnight Monday through Friday EST, or by e-mail at: ebc@uspto.gov. For general information about the PAIR system, see <http://pair-direct.uspto.gov>.

QH/qh
January 4, 2007

A handwritten signature, possibly reading 'QH', is followed by the date '1/4/07'.